

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012993**Date Inspected:** 12-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 730**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1600**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Listed below.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girders (OBG)**Summary of Items Observed:**

The Quality Assurance Inspector (QAI), Scott Croff, was present at the Self Anchored Span (SAS) job site to observe the scheduled fabrication and welding of components for the SFOBB project. The following observations were made:

- 1) OBG Lifts 3E/4E - plate E field splice welding
- 2) OBG Lifts 1E/2E - plate E field splice weld repairs

1) The QAI observed ABF personnel welding plate E at OBG lifts 3E/4E field splice. The QAI noted that this vertical position (3G) complete joint penetration (CJP) weld is being made in segment E1 from 2230mm to 5278mm. The QAI noted that the Quality Control (QC) Inspector Tom Pasqualone is monitoring this welding. The QAI observed ABF workers Mitch Sittinger, ID 0315, and Song Tao Huang, ID 3794, making the welds with gas shielded flux cored arc welding (FCAW-G). See the attached photo. The QAI was informed that welding procedure specification (WPS) ABF-WPS-D15-3040A-1 is being used for this welding. As the welding commenced, the QAI randomly measured the preheat, interpass temperature and welding parameters and noted that they appeared to be conforming to the WPS requirements. This welding was in progress at the end of the QAI's shift.

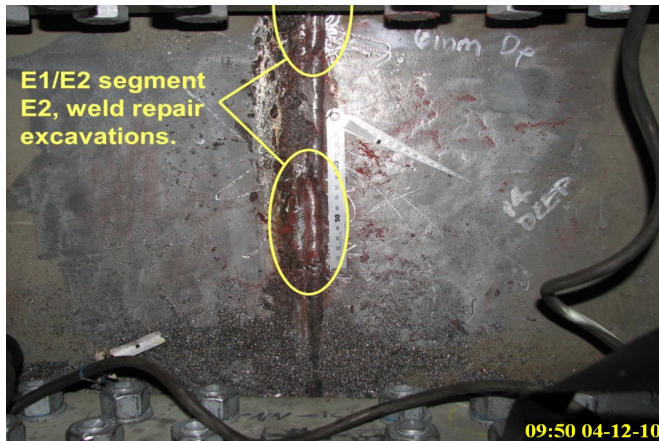
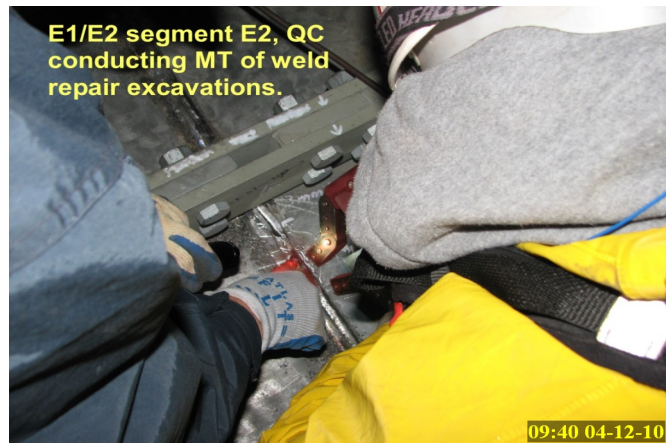
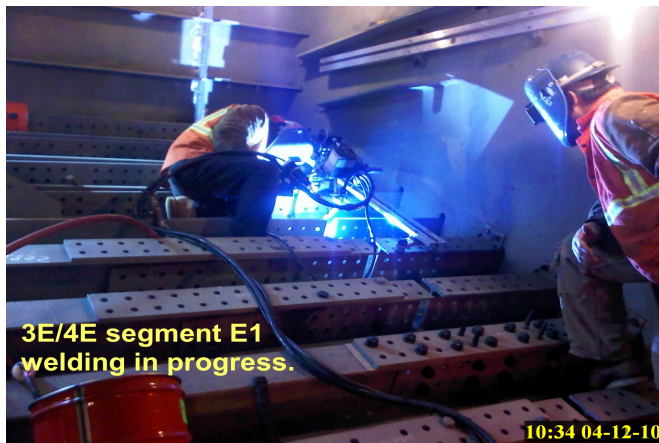
2) The QAI observed ABF personnel excavating portions of the CJP weld segments E1 and E2 at OBG Lifts 1E/2E field splice. The QAI observed the QC Inspector Jesus Cayabyab measuring the excavations and performing magnetic particle testing (MT) of the excavated weld portions. The QAI noted that there are a total of 6 excavations. The QAI was informed that these areas of weld were identified as being rejectable during

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ultrasonic testing (UT). The QAI made visual examination of the excavations and noted that they were ground out with a die grinder and have a smooth tapered profile to the original weld. The QAI measured the excavations and noted that the largest and deepest excavation in the 20mm thick weld appears to be 14mm deep and 90mm long. See the attached photo. The QAI was informed that the excavations (repairs) will be re-welded using shielded metal arc welding (SMAW) with 1/8" diameter E7018-H4R electrode and ABF-WPS-D15-1000-Repair. As the repair welding commenced, the QAI randomly measured the preheat temperature and welding parameters and noted that they appeared to be conforming to the WPS requirements. See the attached photo. The QAI also noted that the contract requires a 24 hour period after welding before the final inspection can be performed.

The QAI observed that ABF personnel are transferring equipment to / from several field splice locations and are in the process of preparing to back weld the C1 and C2 segments at OBG Lifts 2E/3E. The QAI was informed that the back welding will not start during this shift.



Summary of Conversations:

The QAI relayed the observations of OBG splice welding to the QAI Danny Reyes and the QAI Lead Bill Levell. The QAI also generated a shift turn-over report with this information. There were no other notable observations or conversations during this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi, (916)813-3677, who represents the Office of Structural

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Materials for your project.

Inspected By: Croff,Scott

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer